

REMARKS/ARGUMENTS

In response to the Examiner's rejections as set forth in the aforementioned final Office Action and Advisory Action, Applicants have requested entry of the Amendment filed on December 19, 2003 as well as entry of this present Amendment.

Reconsideration and favorable action is respectfully requested in this case in view of the further claim amendments in this Amendment and the following remarks.

In the Advisory Action, the Examiner continued to reject all of the claims over the prior art previously cited in the final Office Action. Thus, claims 2-5, 7-9, 11-15 and 19 were rejected under 35 U.S.C. § 102(e) as being anticipated by Brown et al. and claims 10 and 16-18 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Brown et al. in view of de Hita et al. Applicants respectfully traverse the Examiner's §§ 102 and 103 rejections of the claims.

In the Advisory Action, the Examiner alleges that the generation of a term set weight at column 12, lines 22-41 of Brown is the same as the generating of an index entry as recited in claims 2. Assuming arguendo that the Examiner is correct, the actual mechanism by which the term set weights and hence the index entries are generated is completely different from that recited in claim 2. More specifically, within Brown at column 12, lines 34-41 it is described how a term set weight is calculated using the formula $\log((N/n)+1)$, where N is the count of database records used by the index, and n is the number of records referenced within the N records by a single term set. Such operation does not read on to the steps of claim 2, wherein each field of a database record is analyzed in accordance with a predetermined criterion, which comprises each of a plurality of predetermined formats, searching the analyzed field to identify a

sequence of characters having a format corresponding to the predetermined format, and wherein if characters are not identified as one of the predetermined formats, then they are defined as a free text entry. The claimed operation is simply completely different from that disclosed in Brown.

Moreover, the Examiner appears to equate the index contents of the index 61 shown in Figure 8 of Brown with the structure of a database record as used in the present invention. However, the fallacy of this is self evident, the index 61 in Figure 8 is the index to the database 60, and not the database itself. Moreover, each of the fields of a particular index entry are predetermined as one of an "entry," "w" or "term set" field. Contrary to the Examiner's suggestion, none of these fields are free text fields.

Furthermore, within the Advisory Action the Examiner attempts to equate a database record 80 from the database 60 with a database record as used in the present invention. However, column 9, lines 51-57, together with Figure 5 of Brown describe the database record structure preferably used therein, namely, that each database record 80 contains data in record fields 81-87, respectively, identifying the record number in the database, a corporate name, street number, street name, city and state, zip code and phone number. As the purpose of each record field 81-87 in a typical database 80 is thus defined, none of these entries are free text entries within the meaning of the present invention. The Examiner attempts to equate "free text entries" as used in the present application as merely containing an address entry and a telephone number entry, but as described at page 2, lines 24-26 of the present specification, a free text entry will include a description of the company's product or services, an address entry, and a telephone entry. Indeed, by "free text entry"

Applicants are not even intended to be limited to these particular types of entries, but instead means that any text of any description or format may be placed in such a free text field.

In conclusion with respect to claim 2, therefore, within Brown, the only index entry which is taught being generated is that of the term set weight "w," the generation of which does not read at all on to Applicants' invention as claimed in claim 2.

Applicants have amended claim 11 to clarify the operation of the invention and in particular the operation of the slot filler in identifying object components of the natural language phrase which represent an object of the request, and then subsequently allocating the identified objects to respective slots of a slot and filler request. Such claimed operation means that claim 11 differs from the arrangement of Brown in at least two points. The first is that Brown does not receive a request for information comprising a natural language phrase, contrary to the assertion of the Examiner. Instead, Brown receives a record structure 76, with data entered into specific search fields (*cf* column 9, lines 40-50, and column 9, line 67 to column 10, line 1). Such a record structure 76 as used in Brown is not a natural language phrase request as used in the present invention.

Secondly, Brown fails to disclose a slot filler arranged to identify, from the components of the phrase determined by the parser, one or more object components of the phrase representing an object of the request, the slot filler being further provided with a slot and filler request, and further arranged to allocate at least one of the identified object components to a respective slot of the slot and filler request, as claimed. Such claimed operation is essentially in two parts: firstly the slot filler

identifies object components of the phrase from the components of the phrase determined by the parser, and then secondly allocates at least some of the identified object components to respective slots of the slot and filler request.

Such claimed operation is different from Brown, as within Brown there is no step of identifying one or more object components of the phrase which represent an object of the request from the components of the input phrase, and then allocating the identified components to slots of a slot and filler request. Instead, within Brown, each search field received as part of the input record structure 76 is parsed into elements (*cf* column 10, lines 1-2) and then each element is converted into a Soundex term with a Soundex function (*cf* column 10, lines 7-9). Thus, for the example of Figure 6 of Brown, the three elements of the input name "Best," "Berger" and "corporation" convert to respective Soundex terms B230, B626 and C616 (*cf* column 10, lines 42-44) and once each text element of the search field has been reduced to a Soundex term, each Soundex term is then matched to an index of the database (*cf* column 10, lines 52-54). Thus, within Brown each word contained within each input search field is first converted to a Soundex term, and then matched to an index of the database, so that for each input word a database entry is matched. There is thus no identifying step performed by a slot filler to identify object components of the input phrase representing an object of the request wherein the identified object components are then allocated to respective slots of a slot and filler request. As a consequence, for this second reason, the invention of claim 11 is not anticipated by Brown.

Regarding a combination of Brown with de Hita et al. (U.S. Patent 6,081,774), de Hita et al. disclose in the Abstract and at column 11, line 57 to column 12, line 8, that a

natural language query may be used as an input to an information retrieval system, but nowhere in de Hita is there taught the slot filler feature which identifies object components of the natural language phrase, for allocation to respective slots of a slot and filler request. Therefore, the combination of Brown et al. with de Hita et al. even if it were obvious to make such a combination, would not result in Applicants' inventions recited in claims 2 and 11 and their respective dependent claims.

Therefore, in view of the above amendments and remarks, it is respectfully requested that this application be reconsidered and that all of claims 2-5 and 7-19 standing in the application, be allowed and that the case be passed to issue. If there are any other issues remaining which the Examiner believes could be resolved through either a supplemental response or an Examiner's amendment, the Examiner is respectfully requested to contact the undersigned at the local telephone exchange indicated below.

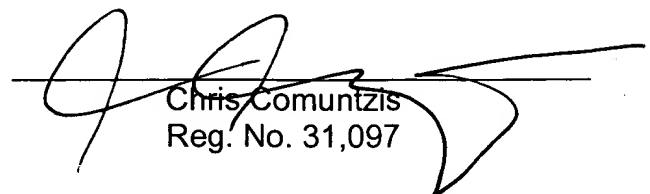
Respectfully submitted,

NIXON & VANDERHYE P.C.

CC:lmr

1100 North Glebe Road, 8th Floor
Arlington, VA 22201-4714
Telephone: (703) 816-4000
Facsimile: (703) 816-4100

By:


Chris Comuntzis
Reg. No. 31,097